

**REMARKS**

Claims 2-15, 20-26, 28-37, 39-42 remain in this application. Claims 1, 16-19, 27 and 38 are canceled without prejudice.

Applicants' previous arguments were persuasive over the Office's previous cited art, and the Office has raised new grounds of objection based on new art that is considered for the first time in this response, namely U.S. Patent 6,557,042 to He et al.

**35 U.S.C. §103****Claims 2-3, 11 and 28-31**

Claims 2-3, 11 and 28-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Atsushi Ono et al, "A Flexible Content-Based Image Retrieval System with Combined Scene Description Keyword", page 201-208, June 17-23, 1996, Multimedia Computing and System (hereinafter "Ono") in view of U.S. Patent 5,579,471 to Barber et al (hereinafter "Barber"). Applicants respectfully traverse the rejection.

**Independent claim 2 recites:**

A method comprising:

initiating a search for images based on at least one query keyword in a query;

identifying, during the search, first images having associated keywords that match the query keyword and second images that contain low-level features similar to those of the first images; and

ranking the first and second images.

The combination of Ono and Barber fails to teach or suggest the method of claim 1. Although Ono describes searching for images based on keywords, the

1 image search is exclusive to keywords. Ono relies on automated keyword  
2 extraction based on scene or image recognition. The extracted keywords are then  
3 used to retrieve images. All multimedia objects (images) in Ono are identified by  
4 particular keywords associated with the multimedia objects (images). In Figs. 4  
5 and 5 of Ono for example, the images are retrieved using two unique keywords  
6 associated with each image. "The keyword enables us to retrieve images by not  
7 only referring to the meaning of the image but also using attributes such as  
8 location, color, shape of segments, and relation between segments or objects".  
9 Ono at page 202, left col., lines 12-15.

10 Ono does not teach or suggest "identifying, during the search, first images  
11 having associated keywords that match the query keyword and second images that  
12 contain low-level features similar to those of the first images".

13 Ono shows that retrieving (see section 3 of Ono) and the recognition model  
14 (see section 4 of Ono) are based on keywords. In particular keywords are  
15 extracted based on scene or image recognition, and the extracted keywords are  
16 then used to retrieve images. All multimedia objects (images) in Ono are  
17 identified by particular keywords associated with the multimedia objects (images).

18 The Examiner cites Ono at page 202, left col., lines 15-22 as teaching the  
19 element of "identifying, during the search, first images having associated  
20 keywords that match the query keyword and second images that contain low-level  
21 features similar to those of the first images".

22 However, the Ono at page 202, left col., lines 15-22 recites "[a]nd when  
23 retrieving, the use of a recognition model which is used to give the keyword can  
24 offset the incompleteness of the present image recognition technique and improve  
25

1 retrieval". The recognition model describe in Ono is used to extract a keyword  
2 which is later used to perform searching.

3 Barber does not teach or suggest the element of "identifying, during the  
4 search, first images having associated keywords that match the query keyword and  
5 second images that contain low-level features similar to those of the first images".

6 Since neither Ono nor Barber suggest the ability for "identifying during the  
7 search, ... second images that contain low-level features similar to the first  
8 images", claim 2 is allowable over the cited combination.

9 Claim 2 further recites "ranking the first and second images". Barber  
10 shows a single sample image that is calculated according to a composite distance  
11 equation. Barber at col. 7, line 67 to col. 8, line 5. Using the composite distance  
12 equation, composite distance values of various images are calculated based on the  
13 single sample image (object). Barber at col. 12, lines 14-15.

14 The Examiner argues that Barber teaches the element "ranking the first and  
15 second images". The ranking shown in Barber ranks a first set of images based on  
16 their composite distance values compared to the composite distance value of a  
17 single image. Since Barber does not teach or suggest "identifying second images  
18 that contain low-level features similar to those of the first images", it follows that  
19 Barber does not teach or suggest ranking such "first and second images" where the  
20 "second images [that] contain low-level features similar to those of the first  
21 images."

22 Accordingly, a combination of Ono and Barber is improper. Applicant  
23 respectfully requests that the §103 rejection of claim 2 be withdrawn.

24 **Dependent claims 3 and 11** depend from and comprise all the elements of  
25 claim 2. As such, dependents claims 3 and 11 are allowable by virtue of their

1 dependency on base claim 2. Applicants respectfully request that the §103  
2 rejection of claims 3 and 11 be withdrawn.

3 **Independent Claim 28 recites:**

4 An image retrieval system comprising:

5 a query handler to handle both keyword-based queries having one or  
6 more search keywords and content-based queries having one or more low-  
7 level features of an image; and

8 a feature and semantic matcher to identify at least one of (1) first  
9 images having keywords that match the search keywords from a keyword-  
10 based query, and (2) second images having low-level features similar to the  
11 low-level features of a content-based query, wherein the feature and  
12 semantic matcher ranks the images.

13 As discussed above in support of claim 2, Ono relies exclusively on  
14 keyword searching for images. Therefore there would be no suggestion in Ono as  
15 to a query handler to handle content-based queries having one or more low-level  
16 features.

17 Ono does not teach or suggest the element of "a query handler to handle  
18 both keyword-based queries having one or more search keywords and content-  
19 based queries having one or more low-level features of an image".

20 Barber also does not teach or suggest the element of "a query handler to  
21 handle both keyword-based queries having one or more search keywords and  
22 content-based queries having one or more low-level features of an image".

23 Since neither Ono nor Barber suggest the "a query handler to handle both  
24 keyword-based queries having one or more search keywords and content-based  
25 queries having one or more low-level features of an image", claim 28 is allowable  
over the cited combination.

1 Claim 28 further recites the element "a feature and semantic matcher to  
2 identify at least one of (1) first images having keywords that match the search  
3 keywords from a keyword-based query, and (2) second images having low-level  
4 features similar to the low-level features of a content-based query, wherein the  
5 feature and semantic matcher ranks the images".

6 Barber shows a ranking of images based on a composite distance value  
7 derived from a single image. The Examiner argues that Barber as teaching this  
8 element; however, Barber does not suggest or teach that images are searched using  
9 keywords and/or low-level features. Therefore there is no suggestion in Barber  
10 that first images that are searched from a keyword-based query and second images  
11 search having low-level features are ranked.

12 Accordingly, a combination of Ono and Barber is improper. Applicant  
13 respectfully requests that the §103 rejection of claim 28 be withdrawn.

14 **Dependent claims 29, 30 and 31** depend from and comprise all the  
15 elements of claim 28. As such, dependents claims 29, 30 and 31 are allowable by  
16 virtue of their dependency on base claim 28. Applicants respectfully request that  
17 the §103 rejection of claims 29, 30 and 31 be withdrawn.

18 **Claims 4-7, 9, 10, 20-23, 34, 36, 37, and 42**

19 Claims 4-7, 9, 10, 20-23, 34, 36, 37, and 42 are rejected under 35 U.S.C.  
20 §103(a) as being unpatentable over Ono in view of U.S. Patent 6,557,042 to He et  
21 al (He). Applicants respectfully traverse the rejection.

22 **Independent claim 4** recites:

23 A method comprising:

24 initiating a search for images based on at least one query keyword in  
25 a query;

1 identifying, during the search, first images having associated  
2 keywords that match the query keyword and second images that contain  
3 low-level features similar to those of the first images;

4 presenting the first and second images to a user; and

5 monitoring feedback from the user as to which of the first and  
6 second images are relevant to the query.

7 As discussed above in support of claim 2, although Ono teaches searching  
8 of images based on keywords, Ono's image searching is exclusive to the use of  
9 keywords. Ono does not teach or suggest that searching of images may be  
10 performed based on low-level features. In particular, Ono does not teach the  
11 element of "identifying, during the search, first images having associated  
12 keywords that match the query keyword and second images that contain low-level  
13 features similar to those of the first images". Furthermore, Ono does not teach the  
14 element of "presenting the first and second images to a user" since Ono does not  
15 teach or suggest that second images are searched which contain low-level features  
16 similar to the first images.

17 Furthermore He does not teach or suggest "identifying, during the search,  
18 first images having associated keywords that match the query keyword and second  
19 images that contain low-level features similar to those of the first images".

20 He is cited by the Examiner for teaching the element of "monitoring  
21 feedback from the user as to which of the first and second images are relevant to  
22 the query". The Examiner particularly argues that:

23 He teaches "there are may be a relationship defined between a  
24 marketing group and an engineering group, such that user feedback  
25 from a user in the marketing group also modifies the corresponding  
segment score in the engineering group. This modification may the

1 same (e.g. increase both scores by two for positive feedback), or  
2 different (e.g., for positive feedback increase the segment score in  
3 the user's group by two and increase the segment score in the related  
4 group by one" (col. 9, lines 56-64). This teaches the increasing the  
5 score by two when there are positive feedbacks from the user means  
6 annotating the segment by two of the marketing and engineering  
7 group. Therefore, it would have been obvious to one ordinary skill  
8 in the art at the time of the invention was made to include the user's  
9 feedback to modify the scores to annotate the marketing and  
10 engineering group to the multimedia object segment to allow the  
11 retrieval of the same segment that relevant to these marketing and  
12 engineering.

13 The Examiner does not discuss how He teaches or suggests the element of  
14 "monitoring feedback from the user as to which of the first and second images are  
15 relevant to the query", but limits his discussion as to He's user feedback regarding  
16 modifying scores from marketing and engineering groups.

17 Since He does not teach the element of "identifying, during the search, first  
18 images having associated keywords that match the query keyword and second  
19 images that contain low-level features similar to those of the first images", a  
20 combination of Ono and He is improper. Applicant respectfully requests that the  
21 §103 rejection of claim 4 be withdrawn.

22 **Dependent claim 42** depends from and comprises all the elements of claim  
23 4. As such, dependent claim 42 is allowable by virtue of its dependency on base  
24 claim 4. Applicants respectfully request that the §103 rejection of claim 42 be  
25 withdrawn.

**Independent claim 5** recites:

A method comprising:

initiating a search for images based on at least one query keyword in  
a query;

1 identifying, during the search, first images having associated  
2 keywords that match the query keyword and second images that contain  
3 low-level features similar to those of the first images;

4 presenting the first and second images to a user;

5 receiving feedback from the user as to whether the first and second  
6 images are relevant to the query; and

7 learning how the first and second images are identified based on the  
8 feedback from the user.

9 As discussed above in support of claim 2, although Ono teaches searching  
10 of images based on keywords, Ono's image searching is exclusive to the use of  
11 keywords. Ono does not teach or suggest that searching of images may be  
12 performed based on low-level features. In particular, Ono does not teach the  
13 "identifying, during the search, first images having associated keywords that match  
14 the query keyword and second images that contain low-level features similar to  
15 those of the first images". Furthermore, Ono does not teach the element of  
16 "presenting the first and second images to a user" since Ono does not teach or  
17 suggest that second images are searched which contain low-level features similar  
18 to the first images.

19 As discussed above in support of claim 4, He does not teach or suggest the  
20 element "identifying, during the search, first images having associated keywords  
21 that match the query keyword and second images that contain low-level features  
22 similar to those of the first images". Therefore He does not teach or suggest  
23 "presenting second images to a user" where the "second images [that] contain low-  
24 level features similar to those of the first images." Accordingly, a combination of  
25 Ono and He is improper. Applicant respectfully requests that the §103 rejection of  
claim 5 be withdrawn.



1       **Dependent claims 6 and 7** depend from and comprise all the elements of  
2 claim 2. As such, dependent claims 6 and 7 benefit from the arguments in support  
3 of claim 2 and are allowable by virtue of its dependency on base claim 2.

4       Claims 6 and 7 recite the element of "presenting the first and second images  
5 to a user". As discussed in support of claim 4, since Ono does not teach or suggest  
6 that second images are searched which contain low level features similar to those  
7 of the first image, Ono does not teach the element of presenting such second  
8 images to a user.

9       As discussed above in support of claim 4, He does not teach or suggest the  
10 element "identifying, during the search, first images having associated keywords  
11 that match the query keyword and second images that contain low-level features  
12 similar to those of the first images". Accordingly, a combination of Ono and He is  
13 improper. Applicant respectfully requests that the §103 rejection of claims 6 and 7  
14 be withdrawn. Accordingly, a combination of Ono and He is improper. Applicant  
15 respectfully requests that the §103 rejection of claims 6 and 7 be withdrawn.

16       **Dependent claims 34 and 36** depend from and comprise all the elements of  
17 claim 28. As such, dependent claims 34 and 36 benefit from the arguments in  
18 support of claim 28 and are allowable by virtue of their dependency on base claim  
19 28.

20       Claims 34 and 36 recite the element of "a user interface to present the  
21 images identified by the feature and semantic matcher to a user, the user interface  
22 allowing the user to identify which images are relevant to a particular search  
23 query."

24       As discussed in support of claim 2, Ono teaches searching based on  
25 keywords (i.e., semantics) and does not teach or suggest searching based on

1 features. Therefore Ono fails to teach or suggest presenting images identified by a  
2 feature matcher.

3 He also does not teach or suggest the element "a user interface to present  
4 the images identified by the feature and semantic matcher to a user, the user  
5 interface allowing the user to identify which images are relevant to a particular  
6 search query". Accordingly, a combination of Ono and He is improper. Applicant  
7 respectfully requests that the §103 rejection of claims 34 and 36 be withdrawn.

8 **Dependent claim 10** depends from and comprises all the elements of claim  
9 9. As such, dependent claim 10 benefits from the arguments in support of claim 9  
10 and is allowable by virtue of its dependency on base claim 9.

11 Claim 10 recites the element of "identifying additional images with low-  
12 level features similar to those of the example image". Examiner argues that this  
13 element is taught by Ono; however, as discussed in support of claim 2, Ono  
14 identifies images through use of a keyword and not low-level features.

15 He does not teach or suggest the element "identifying additional images  
16 with low-level features similar to those of the example image". Accordingly, a  
17 combination of Ono and He is improper. Applicant respectfully requests that the  
18 §103 rejection of claim 10 be withdrawn.

19 **Dependent claim 37** depends from and comprises all the elements of claim  
20 36. As such, dependent claim 37 benefits from the arguments in support of claim  
21 37 and is allowable by virtue of its dependency on base claim 36.

22 Claim 37 recites the element of "the feature and semantic matcher identifies  
23 additional images with low-level features similar to those of the example image".  
24 Examiner argues that this element is taught by Ono; however, as discussed in  
25

1 support of claim 2, Ono identifies images through use of a keyword (semantics)  
2 and not low-level features.

3 He does not teach or suggest the element "the feature and semantic matcher  
4 identifies additional images with low-level features similar to those of the example  
5 image". Accordingly, a combination of Ono and He is improper. Applicant  
6 respectfully requests that the §103 rejection of claim 37 be withdrawn.

7 **Independent claim 20 recites:**

8 A method comprising:

9 presenting a result set of images that are returned from an image  
10 retrieval search of a query having at least one keyword;

11 monitoring feedback from a user as to whether the images in the  
12 result set are relevant to the query;

13 in an event that the user selects at least one image as being relevant  
14 to the query, associating the keyword in the query with the selected image  
15 to form a first keyword-image association and assigning a comparatively  
16 large weight to the first keyword-image association; and

17 in an event that the user identifies an example image for refinement  
18 of the search, associating the keyword in the query with the example image  
19 to form a second keyword-image association and assigning a comparatively  
20 small weight to the second keyword-image association.

21 The Examiner relies on He as teaching or suggesting "associating the  
22 keyword in the query with the selected image to form a first keyword-image  
23 association and assigning a comparatively large weight to the first keyword-image  
24 association" and "associating the keyword in the query with the example image to  
25 form a second keyword-image association and assigning a comparatively small  
weight to the second keyword-image association."

1 He describes the use of annotation in the context of association to a  
2 temporal (time) location or range. See He, col. 3, line 67 to col. 4, line 5. He also  
3 teaches increasing scores by a user as argued by the Examiner. He does not  
4 suggest that a keyword may be associated with an image (i.e., first keyword-image  
5 association and a second keyword-image association).

6 Neither Ono nor He teach or suggest the use of an "example image" and the  
7 element of "associating the keyword in the query with the example image to form a  
8 second keyword-image association and assigning a comparatively small weight to  
9 the second keyword-image association". Accordingly, a combination of Ono and  
10 He is improper. Applicant respectfully requests that the §103 rejection of claims  
11 20 be withdrawn.

12 **Dependent claim 21** depends from and comprises all the elements of claim  
13 20. As such, dependent claim 21 benefits from the arguments in support of claim  
14 20 and is allowable by virtue of its dependency on base claim 20.

15 Claim 21 recites the element of "conducting both content-based image  
16 retrieval and semantic-based image retrieval." Examiner argues that this element  
17 is taught by Ono; however, as discussed in support of claim 2, Ono identifies  
18 images through use of a keyword (semantics) and not low-level features.  
19 Applicant respectfully requests that the §103 rejection of claim 21 be withdrawn.

20 **Dependent claim 22** depends from and comprises all the elements of claim  
21 20. As such, dependent claim 22 benefits from the arguments in support of claim  
22 20 and is allowable by virtue of its dependency on base claim 20. Applicant  
23 respectfully requests that the §103 rejection of claim 21 be withdrawn.

**Claims 8 and 35**

Claims 8 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in view of He and U.S. Patent 5,995,578 to Cullen et al (Cullen). Applicants respectfully traverse the rejection.

Dependent claim 8 depends from and comprises all the elements of claim 7. As such, dependent claim 22 benefits from the arguments in support of claim 7.

Claim 8 further recites "grouping the low-level features of the images deemed relevant by the user". The Examiner cites Cullen as teaching this element. However, the grouping step that the Examiner refers to Cullen is related to grouping together documents based on a text based search, and not the recited "grouping of low-level features of the images". Cullen at col. 4, lines 22-23. Accordingly, a combination of Ono, He, and Cullen is improper. Applicant respectfully requests that the §103 rejection of claims 8 be withdrawn.

Dependent claim 35 depends from and comprises all the elements of claim 34. As such, dependent claim 35 benefits from the arguments in support of claim 34.

Claim 34 recites language similar to claim 8, specifically "the feedback analyzer groups the low-level features of the images identified as relevant by the user." The Examiner relies on Cullen as teaching this element; however, as discussed the grouping in Cullen is that of documents based on a text based search, and not grouping of low-level features of the images.

**Claims 12-15, and 39-41**

Claims 12-15, and 39-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,579,471 to Barber et al (Barber) in view of He. Applicants respectfully traverse the rejection.

**Independent claim 12 recites:**

A method comprising:

permitting entry of both keyword-based queries and content-based queries;

finding images using both semantic-based image retrieval and low-level feature-based image retrieval;

presenting the images to a user so that the user can indicate whether the images are relevant; and

conducting semantic-based relevance feedback and low-level feature-based relevance feedback in an integrated fashion.

Barber does not teach or suggest the elements of "presenting the images to a user so that the user can indicate whether the images are relevant; and conducting semantic-based relevance feedback and low-level feature-based relevance feedback in an integrated fashion."

Barber describes a visual characteristic search of images in a database. Images may be selected based on several characteristics including color, pixel information, and text annotation. The images from the search are simply presented to a user without any feedback from the user as to relevance. This precludes the ability for "conducting semantic-based relevance feedback and low-level feature-based relevance feedback in an integrated fashion."

Barber shows an image query performed by a "query-by-image-content (QBIC) engine 32 which receives the RUN QUERY". Barber at col. 5, lines 31-32. "The results of the search are used by the QBIC engine 32 to construct a result list of images satisfying the query parameters ... and the images in the result list are provided to the window control 22 for display in a results window, which is not

1 shown." Barber at col. 5, lines 34-42. Although Barber describes how the results  
2 are presented to the user, Barber does not disclose that the user may indicate  
3 whether the results are relevant. The method described in Barber would not have a  
4 need to allow the user to indicate which results are relevant, since as the Examiner  
5 admits "Barber does not explicitly teach conducting semantic-based relevance  
6 feedback and low-level feature-based feedback". Without a need to provide  
7 feedback, there is no need to provide a user the ability to indicate if the results are  
8 relevant.

9 He does not suggest or teach the elements of "presenting the images to a  
10 user so that the user can indicate whether the images are relevant; and conducting  
11 semantic-based relevance feedback and low-level feature-based relevance  
12 feedback in an integrated fashion."

13 Accordingly, a combination of Barber and He fails to teach or suggest the  
14 claimed methods. Applicants respectfully request that the §103 rejection of claim  
15 12 be withdrawn.

16 **Dependent claims 13-15** depend from and comprise all the elements of  
17 currently amended claim 12. As such, dependent claims 13-15 are allowable by  
18 virtue of their dependency on base claim 12. Applicants respectfully request that  
19 the §103 rejection of claims 13-15 be withdrawn.

20 **Independent claim 39** recites:

21 A computer-readable medium having computer-executable  
22 instructions that, when executed, direct a computer to:

23 find images using both semantic-based image retrieval and low-level  
24 feature-based image retrieval;

25 present the images to a user so that the user can indicate whether the

images are relevant; and

concurrently conduct semantic-based relevance feedback and low-level feature-based relevance feedback.

The combination of Barber and He fails to teach or suggest the computer-readable medium of claim 39. Barber does not suggest or teach "present[ing] the images to a user so that the user can indicate whether the images are relevant." Lang does not suggest or teach "concurrently conduct[ing] semantic-based relevance feedback and low-level feature-based relevance feedback".

The Examiner presents the same arguments in rejecting claim 39 as presented in rejecting claim 12. Applicants reassert the arguments presented above supporting claims 12, in support of claim 39. Applicants respectfully request that the §103 rejection of claim 39 be withdrawn.

**Dependent claims 40 and 41** depend from and comprise all the elements of base claim 39. As such, dependent claims 40 and 41 are allowable by virtue of their dependency on base claim 39. Applicants respectfully request that the §103 rejection of claims 40 and 41 be withdrawn.

**Claim 38**

Claim 38 is rejected under 35 U.S.C. §103(a) as being unpatentable over He. Claim 38 is canceled.

**Claims 24-25**

Claims 24-25 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,442,438 to Nojima (Nojima) in view of U.S. Patent 6,504,571 to Narayanaswami (Narayanaswami). Applicants respectfully traverse the rejection.



1 The Examiner presents the same arguments as in the Office Action of April  
2 23, 2003. Applicants present the following arguments for Examiner's  
3 reconsideration.

4 **Independent claim 24 recites:**

5 A method comprising:

6 computing, for each category, a representative feature vectors of a  
7 set of existing images within the category;

8 determining a set of representative keywords that are associated with  
9 the existing images in each category;

10 comparing, for each new image, the low-level feature vectors of the  
11 new image to the representative feature vectors of the existing images in  
each category to identify a closest matching category; and

12 labeling the new image with the set of representative keywords  
13 associated with the closest matching category.

14 Nojima describes a video information retrieval system that allows video  
15 data to be inputted and retrieved. For each video data that is stored (and may be  
16 retrieved), annotation information such as image feature vectors are used to  
17 identify the particular video data. The categories of the video data are not  
18 provided a representative feature vector.

19 The combination of Nojima and Narayanaswami fails to teach or suggest  
20 the method of claim 24.

21 The Examiner specifically cites Nojima as teaching "computing, for each  
22 category, a representative feature vectors of a set of existing images within the  
23 category." Nojima, however; fails to teach or suggest that feature vectors may be  
24 computed for each category. Although Nojima describes the use of feature vector,  
25 such feature vectors are related to individual and particular video data. Nojima

1 describes the use of a feature vector calculation processing module 72 that  
2 calculates an image feature vector for each extracted still image. Nojima at col. 5,  
3 lines 10-12. Nojima does not teach or suggest that feature calculation processing  
4 module 72 may be used for a category of images. Although Nojima is cited for  
5 teaching "comparing, for each new image, the low-level feature vectors of the new  
6 image to the representative feature vectors of the existing images in each category  
7 to identify a closest matching category", the Examiner has not shown where in  
8 Nojima it is disclosed that representative feature vectors are used to identify a  
9 closest matching category, since Nojima is directed to applying feature vectors to  
10 individual objects and not categories.

11 Narayanaswami is cited for teaching "the annotation module annotates the  
12 keywords to the images" Narayanaswami, however, provides no assistance as to  
13 the recited methodology of claim 24. Applicants respectfully request that the §103  
14 rejection of claim 24 be withdrawn.

15 **Dependent claim 25** depends from and comprise all the elements of claim  
16 24. As such, dependent claim 25 is allowable by virtue of its dependency on base  
17 claim 24. Applicants respectfully request that the §103 rejection of claim 25 be  
18 withdrawn.

19 **Claim 26**

20 Claim 26 is rejected under 35 U.S.C. §103(a) as being unpatentable over  
21 Nojima in view of Narayanaswami and in further view of U.S. Patent 5,594,809 to  
22 Kopec et al (Kopec). Applicants respectfully traverse the rejection.

23 The Examiner presents the same arguments as in the Office Action of April  
24 23, 2003. Applicants present the following arguments for Examiner's  
25 reconsideration.

1       **Dependent claim 26** depends from and comprises all the elements of claim  
2 24. Applicants reassert the arguments presented above supporting claim 24, in  
3 support of claim 26.

4       As such, dependent claim 26 is allowable by virtue of its dependency on  
5 base claim 24. Applicants respectfully request that the §103 rejection of claim 26  
6 be withdrawn.

7       **Claims 29-30**

8       Claims 29-30 are rejected under 35 U.S.C. §103(a) as being unpatentable  
9 over Nojima in view of Narayanaswami and in further view of U.S. Patent  
10 6,504,571 to Stuckey et al (Stuckey). Applicants respectfully traverse the  
11 rejection.

12       The Examiner presents the same arguments as in the Office Action of April  
13 23, 2003. Applicants present the following arguments for Examiner's  
14 reconsideration.

15       **Dependent claims 29-30** depend from and comprise all the elements of  
16 amended claim 28. Applicants reassert the arguments presented above supporting  
17 claim 28, in support of claims 29-30.

18       The Examiner has not shown where in Nojima or Narayanaswami it is  
19 disclosed "a feature and semantic matcher to identify at least one of (1) first  
20 images having keywords that match the search keywords from a keyword-based  
21 query, and (2) second images having low-level features similar to the low-level  
22 features of a content-based query, wherein the feature and semantic matcher ranks  
23 the images" as recited in base claim 28. Stuckey provides no assistance as to the  
24 image retrieval system of claims 29-30.  
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1 According a combination of Nojima, Narayanaswami, and Stuckey fails to  
2 teach or suggest the image retrieval system of claims 29-30. Applicants  
3 respectfully request that the §103 rejection of claims 29-30 be withdrawn.  
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CONCLUSION

All pending claims 2-15, 20-26, 28-37, 39-42 are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the subject application. If any issues remain that prevent issuance of this application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

Dated: 2/27/04By: 

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